

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of the claims in this application.

Listing of claims:

Claims 1-40 (Canceled)

41. (Currently Amended) A synthetic multimeric biopolymer comprising a plurality of monomeric units ~~selected from the group consisting of~~ chosen from proteins, polypeptides, nucleic acids, peptide nucleic acids, and combinations thereof;

~~wherein said monomeric units are covalently linked to each other;~~

wherein a plurality of said monomeric units in said biopolymer comprise a binding region for an analyte ~~selected from the group consisting of~~ chosen from a sugar, a protein, a peptide, a nucleic acid, a hormone, a vitamin, a co-factor, an anion, and a cation,

wherein ~~each of~~ the monomeric units that comprise a binding region for an analyte are covalently linked to each other;

wherein each of the covalently linked monomeric units that comprise a binding region for an analyte generates a signal when the analyte is bound thereto; and

wherein the signal generated by the covalently linked monomeric units that comprise a binding region for an analyte when the analyte is bound thereto is greater than the signal generated by the monomeric units that comprise a binding region for an analyte not covalently linked to each other when the analyte is bound thereto

~~exhibits a change its three dimensional conformation in response to binding of the analyte to said monomeric unit, said conformational change in each of said monomeric units being detectable by NMR, X-ray crystallography or a biosensing system which detects the change in fluorescence of a reporter fluorophore that has been attached to said monomeric unit;~~
and

~~wherein said multimeric biopolymer exhibits a greater change in its three dimensional conformation in response to binding of the analyte to said binding region of said monomeric units than the conformational change that occurs in an individual monomeric unit as a result of binding of an analyte to said individual monomeric unit.~~

Claims 42-57 (Canceled)